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DEPARTMENT OF NATURAL RESOURCES

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Division of Oil Gas and Mining

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July 16, 2007

CERTIFIED RETURN RECEIPT
7004 2510 0004 1824 4639

Ash Grove Cement Company
C/o Duane Crutchfield
PO Box 51
Nephi, Utah 84648

Subject: Review of Notice of Intention to Commence Large Mining Operations, Ash Grove Cement Company, Leamington Cement Plant, M/023/004, Task ID# 1720, Juab County, Utah

Dear Mr. Crutchfield:

The Division has completed a review of your initial response for the Leamington Cement plant received March 5, 2007. After reviewing the information, the Division has the following comments which need to be addressed before tentative approval may be granted.

The comments are listed below under the applicable Minerals Rule heading. Please address only those items requested in the attached technical review. Send replacement pages of the original notice **using redline and strikeout text** and indicate how these are to be incorporated into the current approved plan using Form-MR-REV-att found on the Divisions web page.

The Division requests that submittals are made according to the following format. Notices and changes should be three hole punched, maps folded and placed in a plastic 8 ½ by 11 sleeve, and binders provided for new notices, revisions, applications, or other changes of 30 pages or more (binders need only be provided once). Applications should not be bound.

If you have any questions in this regard please contact me, Lynn Kunzler, Tom Munson, Paul Baker or Beth Ericksen of the Minerals Staff. If you wish to discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

Susan M. White
for Susan M. White
Mining Program Coordinator
Minerals Regulatory Program

SMW:tm:sb
Attachment: Review, Form MR-REV-att
cc: Tom Munson, DOGM
Beth Ericksen, DOGM
O:\M023-Juab\M0230004-Leamington\draft\REVIEW-06212007.doc



SECOND REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

**Ash Grove Cement Company
Leamington Cement Plant**

**M/023/004
July 13, 2007**

R647-4-105 - Maps, Drawings & Photographs

- 105.1 Topographic base map, boundaries, pre-act disturbance
With the approval of this amendment there isn't a map that clearly shows the disturbed area or bonded area boundary. Please provide this map. (TM)
- 105.2 Surface facilities map
Please review and refer to 106.9 (BE)
There are several facilities shown on the Surface Facilities Map, however, they should be numbered and referenced with a legend. (BE)
- 105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)
The Reclamation Activities and Treatments and Map Proposed Area to be Reclaimed and Revegetated is in conflict with the text under part 105.3.14 (B) which indicates only the quarry pit floors in the Central and Northeast Blocks will not be revegetated. This needs to be corrected. Note, the only areas exempt from revegetation are solid rock outcrops, ponds, and the surfaces of roads approved for post mining land use. All other areas will need to be revegetated. Refer to comments under R647-4-110.5. (LK)

105.2.12 The map titled "Comparison of Original Bonded Area to Present Disturbance Limit" does not show the addition of the southwest pit which is included in the surety cost estimate. In addition, the verbiage in VII Surety, indicates there is the mining expansion in to the Northeast reserve block, but that particular verbiage is not used on the map. The map shows additional disturbance areas as shown in blue but it is unclear if that area is considered the expansion into the Northeast block. Please provide clarification on the map and in the text. (BE)

105.3.17 The map titled, "Reclamation Activities and Treatment Proposed Area to be Reclaimed and Revegetated", shows the Old Chaffin Quarries, North and South Access Road, NE and SW Quarry, and Central Quarry as not being revegetated. The information is in conflict with comments in 110.5.11 that indicates vegetation includes all areas except for highwalls. (BE)

The same map (among other maps) shows pond #1, however, in the surety cost estimate, pond #1 is excluded. Explain. (BE)

The same map does not label the ultimate disturbed area that is also included in the surety cost estimate. Please clarify. (BE)

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On the same map, please show the areas that will be ripped. (BE) The disturbed area boundaries on this map don't match the boundaries on other submitted maps. These should be consistent from one map to another. (SW)

The map Proposed Life of Quarry shows the waste rock dump at 12.4 acres, however, the map titled, Comparison of Original Bonded Area to Present Disturbance Limit does not identify the current waste rock dump area. How much will the volume increase? (BE)

R647-4-106 - Operation Plan

106.2 Please provide a statement as to whether deleterious materials will be present or left on Site. If there are such materials, elaborate on the management of them. Please provide information and describe the mining operational procedure. (BE)

106.3 Estimated acreages disturbed, reclaimed, annually.

The text indicates the proposed operations will disturb 229 acres and map titled, "Comparison of Original Bonded Area to Present Disturbance Limit" indicates the additional disturbance will be 257 acres. Please explain this discrepancy and if there is a difference between operational disturbance and additional disturbance. (BE)

106.4 Nature of materials mined, waste and estimated tonnages

The Division cannot locate table 4-106.4-1, please submit. If the volume of waste and topsoil isn't identified on the table, then please provide these values. (BE)

106.6 Please clarify the statement, "The operator does not propose to remove, store, and redeposit any existing soils". (BE)

106.8 Depth to groundwater, extent of overburden, geology

Provide updated information on depth to groundwater measured at USGS well number (c-14-3) 33-bbb-2). (BE)

106.9 Location & size of ore, waste, tailings, ponds

Provide drainage control information in the waste stockpile area. Will effluent drain from the site? Indicate the location of water tanks and dust suppressant tanks in text and map form. According to the table of contents, the map 105-2, is titled, "Surface Facilities Map" which differs from the title of the map mentioned in the text. Please identify and correct, explain or provide the map titled, "Surface Facility-Plant Map". There is a map titled, "Surface Facilities – Quarry", which identifies a storage area. Provide dimensions of the storage area and volume of waste rock stockpile area. (BE)

107.1.12 Identify lengths of time and allowed volumes of hazardous wastes on site before disposing. Please label containers so that wastes are clearly identified. Adopt measures to minimize and prevent accidents. Indicate storage locations of salvageable and hazardous wastes. Please consider recycling of office waste and general trash as it is highly regarded. (BE)

R647-4-107 - Operation Practices

- 107.1 Public Safety and Welfare
 - 107.1.14 Posting warning signs
Placement of warning signs in highwall area(s) is suggested. (BE)
 - 107.1.15 Constructing berms, fences, etc. above highwalls
Any loose material generated from blasting that might migrate toward the edge of the highwall, should be removed immediately. (BE)
- 107.2 Provide location of sediment pond on map. Provide new pond design information. Explain the design parameters involving a storm event. (BE)
- 107.3 Deleterious material safely stored or removed
Indicate that any materials that are used at the site will be properly disposed of and stored to eliminate or minimize any adverse environmental impacts. Controls should be implemented as necessary. (BE)

R647-4-109 - Impact Assessment

- 109.1 Impacts to surface & groundwater systems
- 109.4 Slope stability, erosion control, air quality, safety
See applicable portions of 110.2. Air quality permits may be required for certain mine operations, please reference any such permits. Describe in more detail measures that will be taken to minimize or mitigate impacts to slope stability, erosion, public safety and air quality.
- 109.5 Actions to mitigate any impacts

R647-4-110 - Reclamation Plan

- 110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed
Integrity of the geology is affected by the weaknesses and discontinuities as described in Seegmiller's report. A slope stability-monitoring plan should be devised and implemented, including checking for tension cracks. Safety plans should be developed and executed. Erosion control and groundwater monitoring should be regular and ongoing. Seegmiller's report indicates there were four holes drilled for the study; please indicate the depth and location of these holes. In addition, provide specifics regarding how the Seegmiller report results will be incorporated in the pit design plan. The report indicates the importance of the step-out benches in the Central Pit South Slope, in not only providing a rock fall safety mechanism, but to increase the safety factor as well. Monitoring of all slopes is recommended, including blast monitoring. Checking for blast damage since this is a significant influencing factor in rock fall. As thinner bedded limestone is encountered, a safety plan for addressing and/or remedy potential rock falls

should be developed; especially in the area of the Central Pit highwall where several large rocks are located. Based on Seegmiller's report, the north slope of the central pit, the S2 shale area, the recommendation for slopes in this area is 2:1. In fact any areas that consist of S2 shale should have slopes of 2:1. (BE)

Describe the final reclamation slope configuration(s). (BE)

The waste rock stockpile shows an encompassed 12.4 acres on the map(s), please indicate this information in the text. Please explain how erosion and runoff will be managed.

Indicate depth of ripping and include this information in the surety cost estimate. Please describe how the west drainage will be addressed during reclamation. Provide the volume of waste material from the Southwest pit and how it is incorporated in to the waste area. (BE)

110.5 Revegetation planting program

Map R647-4-1105.3.17.dwg (Reclamation Activities and Treatment Proposed Area to be Reclaimed and Revegetated) identifies 226.2 acres that will not be revegetated. It appears that this acreage involves the highwall, floor, and roads. Please provide justification as to why all these areas cannot be revegetated. It is likely materials on the pit floor could reasonably be amended and ripped to provide a suitable plant growth medium. Before the Division can approve this area to not be revegetated, a variance will need to be requested, providing all the information required under R647-4-112. (LK)

110.6 Operator shall provide a statement indicating that reclamation will be conducted as required by the regulations and rules as amended. (BE)

R647-4-111 - Reclamation Practices

111.1 Public safety & welfare

1.12 Disposal of trash & debris

An environmentally responsible waste strategy plan should be developed and implemented. Each site is unique and requires individual characterization, with the treatment of waste and debris being no exception. If waste piles are created, they should remain on site for reasonable duration, and disposed of in an environmentally protective manner. Waste piles, should be placed to avoid environmental impacts. If there are recyclable materials, a separate area for the collection of these materials is suggested. Hazardous waste (i.e. combustible or flammable liquids), should be disposed of properly, and not mixed with the landfill waste. Explosive remnant (i.e. empty containers, paper and fiber packing materials) shall be disposed of according to manufacturer's instructions. Implement good house keeping procedures, which may include training employees to manage waste properly. (BE)

1.14 Posting warning signs

It is suggested that warning signs be placed closer to the reclamation work area as well. These signs should be highly visible, easy to read and easily understood.

English/Spanish versions should be considered. Signs that become faded and worn should be replaced. (BE)

1.15 Constructing berms/fences above highwalls

Place berms or fence above highwall(s) at public access locations and where there are particular hazards in poor weather, unstable ground, and when working close to the crest. Please elaborate on the statement, "Berms or fences will not be built in areas of difficult access such as in areas of steep natural slopes." The site should be properly protected and safety issues should be adequately addressed. (BE)

111.2 Reclamation of natural channels

The plan describes in brief detail the drainage following mining. It becomes more important with the increased area of disturbed land that the plan provide for designs of reclaimed channels designed to handle the 100 year- 6 hour event. The current drainage map does not show anything but arrows showing the direction of the flow. Please provide the designs of the reclaimed drainage channels at the end of mining. (TM)

111.4 Removal/storage of deleterious material

The statement, "There are no deleterious or potentially deleterious materials on site" seems to be in conflict with 107.1.12. Please provide a statement that these referenced (107.1.12) materials will be properly disposed of in an environmentally safe manner. Indicate the method of disposal. How will solid waste be disposed of? (i.e. concrete, brick, rebar) (BE)

111.5 Land capable of post mining land use

Leaving 226.2 acres unreclaimed (not revegetated) does not necessarily meet the post mining land use of wildlife habitat and grazing. Please explain how not revegetating such a large tract leaves the land capable of the post mining land use. Refer also to comments under R647-4-110.5. (lk)

111.6 All slopes regraded to stable configuration

Elaborate on a stable configuration, and identify the parameters that comprise stability for all areas. Be specific, without using averages. As mining progresses, additional stability reports may be required, as Seegmiller's report would not be conclusive as the pit dynamics change. Identify the determining factors that would warrant this action. (BE)

111.7 Highwalls stabilized at 45 degrees or less

Please refer to comments in 110.2

111.8 All roads & pads reclaimed

See variance section. (BE)

R647-4-112 – Variance

Previously approved variances are not automatically extended to new areas not identified with the original variance request. In order to extend these variances, you will need to provide the following documentation for each variance for the new areas:

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1. The rule(s) as to which a variance is requested;
2. The variance requested and a description of the area that would be affected by the variance;
3. Justification for the variance;
4. Alternate methods or measures to be utilized.

The planned slope is much higher than the highwalls associated with the Chaffin Quarries, therefore the difference in slope height can increase the likelihood of failure. Please provide the height of the referenced Chaffin Quarries. Generally, an increase in slope height requires a decrease in slope angle to maintain stability. It is suspected that a slope angle reduction would be necessary. To achieve the recommendations in Seegmiller's report, further requirements are necessary that are not identified in the submittal. Due to the joint orientation, the step path failure mode is a possibility that should be assessed. Stability improvements should be implemented: provide a rock fall prevention plan, displacement monitoring plan, blast damage reduction plan, visual monitoring plan. (BE)

Please provide slope data and results for the proposed 31-acre southwest pit. A variance cannot be granted based on slope angle recommendations obtained from other areas in the pit. (BE)

Variances for leaving roads at the end of mining due to the landowner's requests can not be granted until the time of reclamation, as circumstances could change. Please include bonding costs for these roads in the reclamation estimate. (BE)

R647-4-113 – Surety

The text indicates the calculations are site-specific, but the cost estimate tables reference RS Means. Please clarify and identify all source information. Identify any adjustments if any. Please generate a table that categorizes the cost information so that it is easier to follow. In the text, explain the content of each category. If there are any assumptions made within the categories, break them out, and identify and explain them. Please provide costs for: septic system removal, fencing, water tanks etc. Location Factor determined at 78.2% from RSMeans Site Work and Landscape Cost Data 2007 for Price, Utah. Adjustment multiplier may be applicable in certain instances, however, additional information is required. Please identify and provide the specific influencing factors that contribute to this Index. The influencing factors must have absolute applicability. Provide information regarding the site clean and explain how the cost of 2250.00 was derived. (BE)

In a table, list equipment used in the reclamation and include mobilization and demobilization costs. (BE)

Provide costs for infrastructure removal. (BE)

Provide a detailed table that includes roads, structures and buildings, yards and storage areas, and stockpile areas showing the previously disturbed areas in acres and the proposed areas in acres. (BE)

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Provide a table of areas to be revegetated that includes: grade (i.e. steep, gentle), area in acres, seed unit costs, etc. (BE)

Provide more detail regarding the site clean up and trash removal costs. (BE)

Provide cost to continue monitoring (during reclamation) of the highwall in the central area of the quarry. (BE)

For 2007, the escalation is 3.2% (BE)

Please identify the changes that have been made to the table titled, Surety Estimate Using 2007 Construction Cost Data – Ash Grove Cement Co. (BE)